

Coastal Impact Assistance Program Grant Proposal

Project Title: Cameron Meadows Drainage Improvements

Entity Nominating Project: Dore Energy Corporation (DEC)

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Total CIAP Funds Requested: \$55,506

Infrastructure Funds Proposed: 0

Description and Location of Project: The project consists of the addition of culverts at three separate sites that have existing culverts. Two flap-gated culverts would be installed in a plug in the B-1 Canal and two flap-gated culverts would be installed in two road embankment locations. The two road embankment project areas currently have two flap-gated culverts with the same dimensions (48-in diameter x 30 ft length) and the plug in the B-1 Canal has two similar, but longer culverts. The new culverts would be set adjacent to the existing culverts in all three locations. The purpose of the additional culverts is to increase the drainage capacity of a section of the Magnolia Vacuum Canal (MVC) and the B-1 Canal in order to reduce excessive levels of water that stand on the marsh on a portion of DEC property as well as properties to the south, owned by others.

After coordinating with active oil and gas operators in the Cameron Meadows Oil and Gas Field, portions of the two road embankments would be excavated and six pilings, consisting of two aligned rows, would be pushed/driven in place. Three timber cross members would be through-bolted to the three pairs of pilings to form a crib. The new pair of culverts would be set on the crib that would ensure the culverts remained level during and after construction. Excavated material would be used for backfill to the maximum extent possible. One oilfield mat would be emplaced over the backfilled culverts at each of the two road crossings and covered with limestone. The culverts installed in the B-1 Canal plug would be installed in similar manner sans the oilfield mat and limestone.

The three project areas are located on land, known locally as Cameron Meadows, that is owned by DEC. More formally described, the southernmost of the two project areas is located in Sec. 33, T-14-S, R-13-W; the northernmost road embankment site is in Sec. 28, T-14-S, R-13-W; and the B-1 Canal plug is in Sec. 22, T-14-W, R-14-W, Cameron Parish, LA. The locations of the three project components are depicted in Exhibit A.

According to the 1935 USGS quadrangle map (*Johnsons Bayou, LA*), the MVC was in existence prior to 1935, apparently for the purpose of facilitating drainage. As the result of exploration and development of oil and gas prospects on Cameron Meadows, roads were constructed along and across the MVC, essentially using the waterway for a borrow canal and apparently impeding its previous drainage effectiveness with the east-west cross roads. When DEC obtained the property some ten years ago, the three sets of existing 48-in, flap-gated culverts were already in place. Approximately 1,946 ac of wetlands and waterbodies and 373 ac of uplands, owned by entities other than DEC, comprise the majority of this drainage system (See Exhibit B).

DEC filed essentially the same permit application in 2004 (first application returned by the U. S. Army Corps of Engineers), and again in 2005, to construct and implement an unrelated 1,644-ac, marsh management project. The project consists of levees and water control structures with the western levee of the proposed management area bounding the eastern side of the MVC. DEC proposed to use the water bottom of the MVC as a source of dredged material for the levee with the canal, otherwise, remaining outside of the proposed management area.

In conjunction with the two permit applications, interagency field trips were conducted on February 23, 2005 and February 9, 2006. During both field trips (the first during a high tide event and the second during a low tide event) the participants observed a high volume of water flowing through the southernmost culverts and out of the northernmost culverts. It was apparent that there is a need for additional drainage relief at the two locations. After both field trips, the resource agencies voiced opposition to the marsh management project, as proposed, but recommended an alternative with fewer impacts – the addition of drainage capacity at the three existing culvert locations. The recommendation was for either the addition of two 48-in diameter culverts or bridge replacements at each of the two road embankment sites. The agencies also recommended the emplacement of additional water control structures in the B-1 Canal Plug. The B-1 Canal is the east-west canal to the north that, if equipped with additional water control structures, would provide additional drainage relief. The B-1 Canal Plug, initially constructed to abate saltwater intrusion, was temporarily opened as the result of high water levels resulting from Hurricane Rita. The B-1 Canal Plug with two screw-gate 48-in diameter culverts will be reconstructed later this year (Trahan, Curtis, Manager, Cameron Parish Gravity Drainage District #7 [Drainage District], personal communication with Ed Fike on April 12, 2006). Copies of the agency comments with the recommendations (requested project) highlighted are included as Exhibit C. The proposed budget for this project is included as Exhibit D.

Project Type: Conservation, restoration, and protection of unique and limited coastal habitat (conservation and enhancement of existing wetland vegetation).

Project Justification: The Magnolia Vacuum and B-1 Canals continue to provide drainage to properties owned by others that are located south of the DEC tract. The frequency of excessive levels of high water on DEC and adjacent properties has increased over the past five years (Tiempa, Richard, Land Manager, DEC, personal communication with Ed Fike on various dates, 2005). This condition, if left unchecked, will eventually cause stress to, and loss of, emergent wetland vegetation. Because the problem of excessive water levels on a portion of DEC land is exacerbated with water from adjacent properties, the use of public funds to reduce excessive water levels is clearly justified because of the overall public benefits derived from improved drainage and the need to sustain existing wetlands.

Implementation of this project is needed independent of the DEC's decision to proceed, revise, or defer the current marsh management proposal.

Project cost share: The local in-kind match includes: (1) project management with the DEC's acquisition of regulatory approvals, project coordination with the Drainage District and oil and gas operators, and reporting to the LDNR (projected cost of \$4,000) and (2) Drainage District (projected cost of \$14,600). See Exhibit D for the breakdown of costs and Exhibit E for the Drainage District's pledge of in-kind participation.

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Continued

Is the proposed project free of issues that may impact timely implementation of the project features? Yes. All of the federal and state regulatory and resource agencies are in consensus that the requested drainage improvements are needed (See Exhibit C). The regulatory agencies have indicated that the addition of culverts at the three locations can easily be authorized.

Is the proposed project linked to a regional strategy for maintaining established landscape features critical to sustainable ecosystem structure and function? Yes. The project is one of many coastal restoration and conservation projects that have been implemented by public and to a lesser extent, private funding, in Cameron Parish. The Sabine National Wildlife Refuge is located immediately north of, and adjacent to, the DEC property.

Does the proposed project protect health and safety or infrastructure of national, state, regional, or local significance? Yes. The project would help normalize water levels which in turn would preserve and enhance existing wetland vegetation. Healthy marsh vegetation would provide better storm protection to the oil and gas wells and appurtenances and required road and canal networks that comprise the Cameron Meadows Oil and Gas and the Burton Oil Fields.

How cost effective is the proposed project? Compared to other coastal habitat conservation, protection, and restoration measures, the project is extremely cost effective.

What is the certainty of benefits resulting from implementation of the proposed project? The addition of the culverts would increase the drainage capacity at the three locations by 100% and would invariably help in addressing the problem.

Does the proposed project address an area of critical conservation/restoration need or a high land loss area? According to the *Coast 2050* plan (*Coast 2050: Toward a Sustainable Coastal Louisiana*, Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority, 1998), the affected area is within the 27,064-ac East Johnson's Bayou mapping unit. The unit contained 26,270 ac of marsh in 1932, and by 1990, wetland acreage had declined to 23,500 ac. The *Coast 2050* report projects that by 2050 an additional 5,790 ac of marsh can be expected to be lost which translates into a total wetland loss within the mapping unit of 33 percent. If no action is taken, it is reasonable to assume that wetland loss will continue to occur throughout the unit.

How sustainable are the benefits of the proposed project? By increasing drainage relief, excessive water levels would be reduced, resulting in more favorable conditions for emergent wetland vegetation productivity and as well as increasing stormwater storage capacity in the future. Improved environmental conditions, resulting from the project, would provide sustainable benefits in the future that, otherwise, would not occur.

Exhibit A

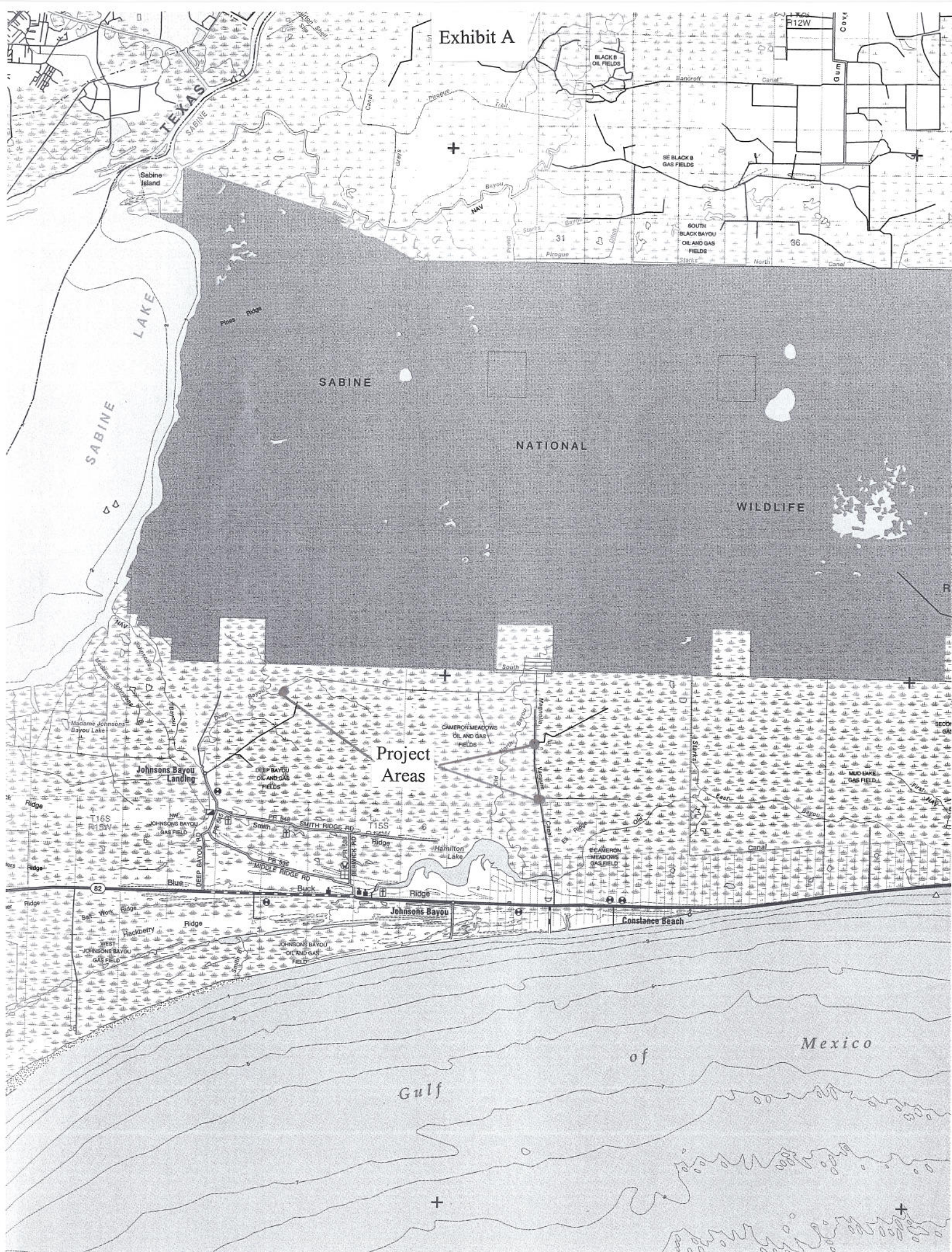




Exhibit B

